

CLAIMS

What is claimed is:

1. An instrument for inserting an implant between vertebral bodies, comprising:
a holder adapted to hold the implant during insertion of the implant between the vertebral bodies;
a retractor adapted to retract the holder away from the implant after the insertion; and
a guard adapted to prevent the implant from being removed from between the vertebral bodies during the retraction.
2. The instrument of claim 1, wherein the retractor comprises a coupling adapted to couple the holder to the guard and by which relative movement between the holder and the guard is effectable during the retraction.
3. The instrument of claim 2, wherein the retractor comprises a threaded coupling that comprises a bore and a screw that is threadable within the bore, such that rotation of the screw within the bore effects relative movement between the holder and the guard.
4. The instrument of claim 1, wherein:
the holder comprises a plurality of arms;
the guard comprises a shaft adjacent the arms, the shaft having an engagement surface;
and
the retractor comprises a threaded bore and a screw that is threadable within the bore, the screw having an end that engages the engagement surface of the shaft.
5. The instrument of claim 1, wherein:
the guard comprises a shaft having a proximal end and a distal end;
the holder comprises a plurality of arms, each having a distal end, the arms being adapted to cooperate to hold the implant using the distal ends of the arms such that the implant is adjacent the distal end of the shaft;

the retractor comprises a bore and a screw that can thread within the bore and engage the proximal end of the shaft.

6. The instrument of claim 5, wherein rotation of the screw within the bore effects the retraction by pulling the arms alongside the shaft.

7. The instrument of claim 6, wherein during the retraction, the distal end of the shaft is engageable with the implant to prevent the implant from being removed from between the vertebral bodies.

8. The instrument of claim 1, wherein:

the guard comprises a shaft having a longitudinal axis, a proximal end having an engagement surface, and a distal end; and

the holder comprises a plurality of arms, each having a proximal end and a distal end and each longitudinally extending alongside the shaft, the arms being adapted to cooperate to hold the implant using the distal ends of the arms such that the implant is longitudinally adjacent the distal end of the shaft during insertion of the implant between the vertebral bodies.

9. The instrument of claim 8, wherein the retractor comprises a bore in longitudinally fixed relation to the arms during the retraction and having a longitudinal axis coaxial with the longitudinal axis of the shaft during the retraction, and a screw that can thread within the bore and having a distal end that can engage the engagement surface of the proximal end of the shaft during the retraction.

10. The instrument of claim 1, wherein:

the holder comprises a set of tongs adapted to hold the implant;

the guard comprises a central rod about which the set of tongs open and close; and

the retractor comprises a screw assembly for retracting the set of tongs away from the implant while maintaining the rod against the implant to prevent the implant from being removed from between the vertebral bodies.

11. The instrument of claim 10, wherein the screw assembly comprises a bore and a screw that is rotatable within the bore to engage the rod during the retraction and move the set of tongs relative to the shaft.
12. An instrument for inserting an implant between vertebral bodies, comprising:
a holder adapted to hold the implant during insertion of the implant between the vertebral bodies; and
a retractor adapted to retract the holder away from the implant after the insertion.
13. The instrument of claim 12, wherein the retractor comprises a coupling by which relative movement between the holder and the retractor is effectable during the retraction.
14. The instrument of claim 13, wherein the retractor comprises a threaded coupling that includes a bore and a screw that is threadable within the bore, such that rotation of the screw within the bore effects relative movement between the holder and the retractor.
15. The instrument of claim 12, wherein the holder comprises a plurality of arms.
16. The instrument of claim 15, wherein the holder comprises a set of tongs.
17. The instrument of claim 16, wherein the retractor comprises a screw assembly for retracting the set of tongs away from the implant while maintaining the implant between the vertebral bodies.
18. An instrument for inserting a implant between vertebral bodies, comprising:
a set of tongs having a proximal end and distal ends adapted to hold the implant during the insertion of the implant between the vertebral bodies; and
a central rod about which the set of tongs can open and close, having a proximal end and a distal end in front of which the distal ends of the set of tongs can hold the implant during the insertion, the rod being coupled to the set of tongs to prevent lateral movement between the rod and the set and allow longitudinal movement between the rod and the set.

19. The instrument of claim 18, further comprising a screw assembly at the proximal end of the set of tongs adapted to retract the distal ends of the set of tongs away from the implant after the insertion while allowing the distal end of the rod to be maintained against the implant during the retraction to prevent the implant from being removed from between the vertebral bodies during the retraction.

20. The instrument of claim 19, wherein the rod is coupled to the set of tongs by a coupling comprising a lateral through slot through the rod that extends longitudinally within the rod, and a pin on the set of tongs that passes laterally through the through slot and travels longitudinally within the through slot during the retraction.